Title (en)

High capacity wavelength division multiplexer

Title (de)

Optischer Wellenlängenmultiplexer hoher Kapazität

Title (fr)

Multiplexeur optique de longueurs d'ondes à grande capacité

Publication

EP 0915584 A2 19990512 (EN)

Application

EP 98119723 A 19981020

Priority

US 96295697 A 19971104

Abstract (en)

Method and apparatus for spatially combining a large number of optical signals of different wavelengths carried on optical fibers (12) from laser sources (10). A dispersive optical device, disclosed as a grating (16), combines the multiple signals into a composite beam. Then a sample of the composite beam is analyzed by passing it through tunable etalon (26) and onto a sensor (30). The etalon (16) is successively tuned to passbands, each of which corresponds to the wavelength of each of the optical signals in turn. The sensor (30) measures angular deviation of each beam caused by wavelength changes, and generate control signals (on lines 36) to adjust each wavelength at its laser source. Thus the apparatus provides for reliable multiplexing of a relatively large numbers of laser sources (10), while the etalon (16) and sensor (30) operate in conjunction with a controller (32), which also generates wavelength control signals for the lasers (10), to ensure accurate beam alignment and more efficient multiplexing.

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CPC (source: EP KR US)

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